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I.

ON THE PRODUCTION OF WORMS IN THE HUMAN BODY.

THE following remarks are taken from an ingenious paper lately published in the Glasgow Journal by Dr. J. Scouler, Professor of Natural History in the Andersonian University.

Do worms originate from a spontaneous generation ? Generation, or the production of a living being, consists, if we separate it from all accidental circumstances, in a separation of a portion of the parent animal, which is endowed with independent vitality. This portion is formed in the ovarium of the female before she has any intercourse with the male, and the principal effect of the spermatic fluid is to excite the dormant powers of the germ into action, and to modify its form. This is the essence of generation properly so called ; but there is another way in which animals, or parts of animals, may be produced. If we cut off the leg, or extirpate the eye of a water newt, these parts are again restored after the interval of a few months, and only differ from those which had been destroyed in being a little smaller. The claws of lobsters and the rays of star-fish are reproduced in the same manner. In the lower animals, this process reaches its maximum of development, and becomes a new mode of continuing the species. If we cut a polype into two portions, and the circumstances be favorable, each section becomes a perfect animal. Many worms, if divided in this manner, grow under the knife, and, if abundance of food be supplied, the division may be continued ad infinitum. A very common fresh water worm, the Planarea of naturalists, if well supplied with food, exhibits this process spontaneously. The animal begins to swell, and several fissures appear on its surface, and it gradually separates into several distinct portions, each of them becoming a perfect animal. Hence generation, by means of sexes, is not necessary for the continuation of animals, and the law of Harvey, *omne vivum ex vivo*, must be changed into *omne vivum e vivo*. This mode of reproduction is by no means rare among the simpler animals ; indeed, it appears to be the only one by which the infusory animalcules are propagated.

Having proved that generation, by means of two sexes, is not essential for the propagation of many animals, we are prepared to advance a step further, and maintain that entozoa may be produced by the animal which they inhabit. When we consider the extreme complexity of the organization of the more perfect animals, and vast variety of tissues which enter into the composition of their organs, we may grant that it is not impossible that the vessels which erect such delicately constituted parts may form others of far greater simplicity. Thus, in many diseases, tumors and tubercles are formed in the organs of animals; and these new formations possess a structure as different from any of the regular tissues of the animal which produced them, as the texture of an entozoon does from that of the creature it inhabits. These tumors may be considered as possessing a degree of vitality peculiar to themselves, and only deriving their nourishment from the body to which they are attached. In the same manner, after rupture of the uterus, when fortunately for the parent she survives the accident, the fœtus becomes encysted, we have a phenomenon of the same kind, the fœtus retaining a portion of its vitality, and the requisite nourishment is derived from the vessels of the mother.

In the instance of tumors and tubercles, already alluded to, their origin is doubtless to be accounted for from a deranged action of the assimilatory arteries, which is of two kinds: in the first they produce a formation which is analogous to the regular structure of some other part of the body, as ossifications and steatomatous tumors. When nutrition is still more deranged, parts are formed which possess no analogy whatever in the healthy state.

Now, it is not improbable that many entozoa owe their origin to a process similar to that we have described. Worms are always a consequence of a diseased state, and when they produce bad symptoms, it is from some accidental circumstance depending on their size, numbers, movements, or from the importance of the organ in which they are found. So that there is a diathesis peculiar to most organic diseases; there is also a verminous diathesis. In support of this, it may also be added, that worms differ from all other animals in being intimately dependent on the organization which they inhabit, for the continuation of their existence; and, in this respect, the parallel between encysted worms and the encysted fœtus, already mentioned, is perfect in every point of view. As the mode of nutrition in every animal is, to a certain degree, *sui generis*, so the worms which they produce are also peculiar.

To express clearly the manner in which worms are supposed to be formed, and to prevent mistakes, we will condense what we have said in a few words. It is not maintained that entozoa are produced from the fluids found in the intestinal tube or in the tissue of organs; but that their germs are formed by some aberration of nutrition, in a manner similar to that in which other new formations originate, and that this germ becomes endowed with an independent vitality, and is evolved into a worm.

The consideration of hydatids affords us a proof of the manner in which entozoa are formed. These cysts are of two kinds—those which are mere serous vesicles, and those which are true entozoa; but the transition from the one to the other is very gradual. We first observe a serous cyst, smooth, polished within, and containing a limpid fluid, and exteriorly fibrous. The next kind, the Acephalocysts of Laennec, consists of an internal fibrous capsule, containing a cyst, which is very thin and transparent, filled with fluid, but destitute of a head or any distinct organs : these are intermediate between the cysts of the first kind and the true entozoa ; so that some writers include them among the common hydatids, and others among the entozoa. We have next the Echinococcus, which is included in a fibrous cyst like the preceding, but contains in its interior many little bodies, which are acknowledged by all writers to be true worms. From these the transition is easy to the cysticerci, with a head like that of a tape worm, attached to a transparent cyst, included, as usual, in a fibrous one. Lastly, we have often found round worms included in such cysts. These facts afford a strong proof to the theory we have adopted.

There are several objections which may be urged against this theory, which it is necessary to notice. As many entozoa have distinct organs of generation, and some of them have individuals of both sexes, and possess a very complicated organization, it has, with great propriety, been urged, that there is no need for seeking any other way of accounting for their propagation than the usual one, and that it is contrary to every analogy to attribute their formation to the process we have described.

To this remark it may be replied, that it has already been demonstrated that the ova of entozoa cannot travel through the tortuous paths of the circulatory vessels ; and, further, many worms, as the hydatids for example, possess no genital apparatus. Nor is to be ascertained that, if the theory we have advanced be correct, organs of generation are of no use ; for, if a worm be once formed, it then propagates its species in the usual manner. A still greater alleviation of this objection is derived from the fact, that many animals, endowed with organs of generation, are frequently propagated by a process totally distinct from it, namely, by a division of their bodies.

Another objection is, that if entozoa were produced in the manner described, we should have nothing regular and determined in their forms, but that new animals of monstrous forms and confused organization would be daily arising.

Nature, however, leaves nothing vague and undetermined in her work ; and the production of entozoa is regulated by fixed and unchanging laws. The same modification in the nutrition of an organ, which produced the first intestinal worm, still continues to operate, and consequently the same animal is formed. We might as well expect to have new diseases springing up every day, and that laws, which regulate the formation of a cancer or an exostosis, should be different in every individual. Nature is always uniform in her operations, and even her most irregular productions are governed by regular laws. Even monsters, which, for a long time, were supposed to be the production of some fortuitous concourse of circumstances, can now be classified and described, and the laws of their formation ascertained with as much precision as those which preside at the origin of a regularly organized individual.

A third objection which may be urged is, that according to this theory, if worms are produced in the manner it supposes, we should have some regular apparatus, of a temporary nature, at least, set apart for their production.

We may reply to this argument, that there are many parts formed in the bodies of animals differing completely from those which are found while it is in a healthy state, and yet we see no apparatus by which they are called into being. We see no apparatus for the production of encysted tumors, or for the formation of earthy matter in the valves of the heart. In these instances, as in the origin of entozoa, we have merely to attribute all these phenomena to the aberrations of nutrition, which constitute the essence of every disease, and the chief cause of every organic change.

II.

ST. VITUS'S DANCE.

With the view of determining the comparative efficacy of the several remedies which have been recommended by different practitioners for the cure of St. Vitus's Dance, Dr. Bardsley has given each a fair trial at the Manchester Infirmary, viz., "purgatives, antispasmodics, (*as camphor*, *opium*, *valerian*, *sulphuric ether*, *musk*;)—tonics, (as the sulphate and carbonate of iron, oxide and sulphate of zinc, nitrate of silver, ammoniated copper and iron, the arsenical solution and sulphate of quinine;) also iodine, strychnine, electricity, the shower bath, friction, with the tartar emetic ointment and blisters along the whole course of the spine. All the remedies, the doctor says, he has found successful, except the purgative treatment so highly extolled by Dr. Hamilton, which frequently failed; but these failures, says he, may have been "occasionally owing to a want of *due* perseverance in its employment." "Whoever undertakes the cure of St. Vitus's Dance," observes Dr. Hamilton, "by purgative medicines, must be decided and firm to his purpose; the confidence which he assumes is necessary to carry home to the friends of the patient conviction of *ultimate* success; otherwise their prejudices will throw insurmountable obstacles in the way."

According to Dr. Hamilton's reports of the efficacy of his system, it generally succeeds in curing the disease in ten days or a fortnight. Dr. Bardsley, who has given this mode of treatment an extensive trial, asserts, that he has "rarely met with examples which yielded so quickly to it; but, on the contrary, that several weeks have sometimes elapsed before a perfect cure has been established." Dr. James Johnson's experience is also opposed to that of Dr. Hamilton; for he remarks, "purgatives are not even generally successful in this disease, when trusted to alone:" as auxiliaries, the doctor has found them occasionally to prove beneficial. Dr. Reeves, physician to the Norfolk and Norwich Hospital, says, in the course of sixteen years, he had seen thirty-five cases of St. Vitus's Dance, all of which, except one, got well under every variety of treatment, from the most powerful down to the most inert and apparently inefficacious remedies. During a period of thirty-six years, the medical department of this institution was conducted by eight different physicians, whose mode of treating the disease varied very considerably; yet, in its cure, success was very nearly equally divided among them. Dr. Lubbock *always* prescribed preparations of iron, and never had recourse to purging; and he assured Dr. Bardsley that "he never failed of success." Dr. Bardsley states, "that he has found antispasmodics, with purgatives, the *speediest and* *most invariably successful mode of curing this affection.* The doctor has chiefly prescribed musk and camphor, in the dose of four grains each, every five hours, and four or five ounces of the assafœtida mixture, with from twenty to thirty drops of laudanum, according to the age of the patient, to be administered clysterwise every night. Relapses have not unfrequently taken place; but the disease was again speedily cured by the same means. When the head is painful, as often happens with young females afflicted with this disease, the doctor found leeches and blisters, applied to the temples and behind the ears, valuable auxiliaries.

The celebrated surgeon Dupuytren, has of late years successfully employed a mode of treatment, which admits of being easily carried into effect, viz., the cold bath, or cold affusion, in the following manner:—The arms and legs of the patient being held by assistants, the whole body is rapidly passed through a cold bath. The immersion, which lasts but an instant, is to be repeated five or six times in the space of fifteen or twenty minutes. At first, violent spasms of the muscles—especially of those of the chest—are produced, and the shock experienced is very disagreeable, which habit soon diminishes. After the immersion, the patient is carefully rubbed dry, and he is made to walk about, and take rather violent exercise, for half an hour, or an hour. At the end of a few days, some improvement is almost always evident; and, occasionally, in the course of fifteen days or a month, the disease, which has existed many years, is so effectually cured, that no trace of it remains. For female patients, he usually prefers the simple affusion of cold water over the head and body. The patient is placed in an arm-chair, and the affusion is repeated seven or eight times in succession. The effects of this treatment, he says, are very similar to those which arise from immersion, and are equally successful in subduing the disease. Baron Dupuytren has lately published several cases of St. Vitus's Dance, in which these modes of treatment fully succeeded. Attention was paid to the alimentary canal.

During the early stage of St. Vitus's Dance, particularly when the system is plethoric, with a determination of blood to the head, the free use of a purgative medicine, as the infusion of senna, and the application of cold water to the head for three or four minutes every morning, often succeed in curing the disease in the course of a fortnight; but, after the vital powers have been reduced by a continuance of the malady, particularly in a leuco-phlegmatic temperament, purgatives, employed as directed by Dr. Hamilton, frequently aggravate the disease, and induce a most dangerous degree of debility. It is during this period of the malady, and particularly when the patient is chlorotic, that preparations of iron and other tonic medicines have succeeded. The following embrocation rubbed along the whole course of the spine every night and morning, with the application of cold water to the head for a few minutes every morning, or whenever the forehead is unusually hot, and such internal medicines and regimen as the state of the stomach and intestines and the constitution may indicate, I have never found to fail in curing the disease in ten days or a fortnight:—Take of Camphorated Spirit, two ounces; Oil of Rosemary, one drachm; Solution of Acetate of Morphine, two drachms. Mix.—*Gaz. of Pract. Med.*

III.

ON DRY FRICTION.

The efficacy of this remedy has the high authority of the renowned Boerhaave, who observed acutely, and reported truly, in his medical pursuits. It has been adopted in succeeding times too desultorily, and with insufficient reliance on its remedial power, to have obtained a just estimate of its intrinsic and practical worth. In all the various affections of the digestive organs, especially in the sluggishness of the liver, and of the peristaltic action of the intestines, friction, well performed, over the whole abdominal region, with a flesh-brush, during half an hour at a time, repeating it at least every night and morning, will probably, in the course of a month, accomplish more than could be effected by any medicinal agency that could be employed. Its influence in promoting a free transmission of the circulating fluids through the viscus within the reach of its power, is greater than may be imagined, and will be found on trial to be extremely availing. The mechanism exerted by this remedy, awakens and propagates motive power more efficiently, perhaps, than could be produced by any medicinal quality, however impressive and energetic.

The practical advantage of friction is its simplicity and the manageable nature of the excitement that results from its use. Instead of the incipient impression of its power being made on the stomach, and hence extended, more or less generally, over the frame, according to its specific properties, as in the case of remedies taken into that viscus, its effect is definite, and admits of the most precise regulation conformably to the curative object intended to be fulfilled.

Not only the abdominal viscera, but also those of the thoracic cavity, are accessible to the effects of friction in a manner that may powerfully alleviate and often cure many of the incidental maladies to which they are liable. Irregular and palpitating action of the heart, and the various derangements of the pulmonary system that are apt to originate the different states of consumptive disease, may be advantageously assisted by friction over the chest, so conducted and pursued as at once to restore, when defective, a healthy transit to the circulating fluids in the subjacent viscera, and to induce and sustain a derivant excitement over the cutaneous surface of the thoracic cavity. Patients, in these cases, should be well rubbed every night and morning by an able assistant, during half an hour at each time, persisting in it as uninterruptedly as the state of the skin will permit. It will occasionally be rendered too irritable to allow an uninterrupted continuance of the remedy. At that time it will be comparatively unnecessary, in as far as any remedial influence which it may possess is, pending that state, under active exertion. In cases of languid circulation in the upper and lower extremities, and also in every instance of chronic pain in the ligamentous, tendinous, and muscular structure, friction may be beneficially employed. Its efficacy in enlarged and inflamed joints has been long established, yet its powers in those cases have not been sufficiently appreciated and regarded. The mutilating knife has often obtruded its officious but mistaken aid, in detaching limbs which might probably have been preserved by the salutary efficiency of friction, rendered adequate to its object by unwearied prosecution.

Ibid.

NEW PESSARY.

To the Editor of the Boston Med. and Surg. Journal.

Sir,—I was favored, a few days ago, with the 1st No. of the N. Y. Medical Journal. After reading Dr. Beck's Address, Dr. Avery's paper upon the Professions in England and France, with his very illiberal remarks upon Mr. Brodie (for which he is repaid in the Review of his work on Dyspepsia), I next came to a well-written practical Essay on Prolapsus Uteri, by Locke Barber, M.D., &c. &c., read before the N. Y. Medical and Philosophical Society,—a disease which gentlemen in extensive obstetric practice often meet with, and as often fail in giving permanent relief, without the aid, either of the natural pessary of pregnancy, or one made of the many substances, compositions, or shapes, suggested by different authors, ancient and modern. Wood, silk, linen, elastic gum, cork-wood, boxwood, ebony, steel, silver, and even gold, have all had their advocates in turn. The round, oval, flat, globular, and so forth, have been equally praised for shape. Towards the latter part of Dr. B.'s Essay, he strongly recommends a globular air pessary, of which he appears to consider himself the inventor. He thus expresses himself:—" The instrument which has been alluded to for supporting a prolapsus of the womb, and the one which *I have had the honor to introduce into practice*, is of a globular shape. A bag of elastic gum, of a suitable size, is secured, perfectly *air-tight*, to a tube of ivory and silver. The tube contains a valvular mechanism, capable of retaining such quantity of air as may be introduced into the bag, which is done by means of other tubes, and a large elastic bottle, so that the pessary may, with the greatest ease, be either inflated or exhausted, after it is introduced into the vagina. By a reference to the plate and explanation, a better idea of its principle may be gathered, than from any other description. In 1829, Dr. Painehaud, an intelligent and extensive obstetric practitioner of Quebec, read before the Quebec Medical Society* a paper on Pessaries—an extract of which I have obtained in the words and language of the author.†

" You will recollect, gentlemen, that at the close of the last paper which I had the honor to present to this Society, reference was made to a new pessary which I had invented. Having tested its value by subsequent experience, I propose this evening to explain to you its peculiar construction. The subject is one of much more importance in practice than is usually accorded to it." * * * * *

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* The Quebec Medical Society has been in existence some years;—papers of considerable merit remain on their shelves unpublished; and if asked why, I should be at a loss to answer.

† This extract was sent us in French—the language in which the paper was originally written and read to the Society. In order to save the reader some trouble, we have hastily translated it into English, preserving certainly the facts, if not the precise diction of the author. Our correspondent will excuse us for omitting part of the extract sent. On examination, he will find it irrelevant to his purpose.—Ed.

"In surgery, as in other arts, we are all influenced by a love of invention, but the great error is that we are too ambitious—we are emulous of splendid discovery, and disdain to give our attention to subjects of small pretension." * * * * "In all sciences, discoveries, often the most important, are the result of accident; and it is to accident alone that I am indebted for the pessary I am about to describe."

"A few months ago, I was present at an operation, by a professional friend, for *fistula in ano*. Hemorrhage became alarming, and not being able to apply a ligature, or sufficient pressure to arrest the bleeding, the operator directed compresses wet in iced water to be applied constantly. It occurred to me to introduce into the rectum an empty bladder, of small size, and then to fill it with cold water by means of a syringe: I then drew it outward (having secured its neck) until it pressed against the bleeding vessels with force sufficient to arrest the hemorrhage; and thus was the life of the patient saved. Reflecting on the possibility of applying this remedy in other and often dangerous cases of internal hemorrhage, the idea of its use as a *pessary* suggested itself to my mind; and in the *bladder of a sheep*, I found a pessary of a construction heretofore untried, and of a material analogous to that of the parts with which it is to lie in contact;—an instrument readily obtained; easily introduced when empty of air; easily removed by letting out the air, water, or other liquid with which it had been injected; easily retained in its place, as it becomes larger than the passage through which it was introduced; and worn without pain to the patient, so similar is its material to that of the part on which it rests. It is scarcely possible, in fact, to find in any instrument a more perfect adaptation to the purposes for which it is designed."

"Having communicated this discovery to Dr. Morrin, that skilful practitioner thought it deserving the attention of the profession, and proposed, as a substitute for the bladder, the gum-elastic bag, such as is used for injections in cases of hydrocele."

Being present at the reading of the above paper, I understood Dr. Morrin to say, in addition to his suggestion about the hydrocele bottle, that one made of the same substance, but circular and hollow, to be inflated in the same manner, would, he thought, be preferable to either, inasmuch as it would not necessarily have to be removed during menstruation; and concluded by regretting he was going to contest Dr. B.'s claims as the inventor of the Air Pessary. Opening at the moment the 3d edition of Dr. Aitken's Principles of Midwifery, or Puerperal Medicine, published in London in 1784, he read as follows:—"Supporting the replaced uterus is not a little difficult. It is attempted, 1st, by a pessary; 2d, bandage.—*Pessary.* Of all the varieties of this instrument, that is preferable which possesses the following qualities,—1st, smoothness; 2d, lightness; 3d, compressibility. I have invented the Air Pessary, which has these characters in a greater degree than any other I know of. The Air Pessary is formed of a small bladder or bag, soft and air-tight, with a valve at the orifice. It is introduced, and then duly inflated, by the patient, by a long flexible tube, which is immediately retired. This instrument, while it is exceedingly light, fully occupies the vagina, and supports perfectly the uterus. When it is wished to retire it, the valve is forced, and immediately it collapses" (see plate xi). During the reading, and for some minutes after, the palsied and astonished countenance of the Dr., at being so suddenly and unexpectedly deprived of his claim as the inventor of the Globular Air Pessary, satisfied every member present that he was no plagiarist, but truly the inventor of what turned out to be an "old friend with a new face." The above, Mr. Editor, is an unvarnished and plain statement of facts, as I became acquainted with them. I should hope there has been no literary pilfering among the competitors.

Yours, &c.

A QUEBEC SUBSCRIBER.

MEDICAL JOURNAL.

BOSTON, APRIL 5, 1831.

IT will give us pleasure, should it be in our power, to afford assistance to any subscriber, in procuring for him, from England, any professional work he may be desirous of obtaining. As physicians who reside at a distance from the sea-coast may value some such facility, we beg them to command our services. No charge will be made other than the original cost, and the expenses of importation. Our friends will remember that all letters to the Editor, on the above or any other business, should be *postpaid*. This condition, we are happy to say, has been very generally observed by those who have favored us with communications. In future, we trust it will be so universally.

MEDICAL TARIFF.

WE acknowledge the receipt of a copy of the "Quebec Medical Tariff," or, as we term it here, *Medical Fee-bill.* It seems that no method was adopted by the Faculty of Quebec, for the purpose of regulating their charges, until about a year ago, when some movement towards this point was made, and a meeting called, by Dr. Holmes, the senior medical practitioner of that city. The result has been, the establishment of a fee-bill, such as is common in this country, and has been practised on in this place for the last 24 years. The charges at Quebec appear to be very reasonable,—generally higher than in Boston, but less, we believe, than in any other city in the States.

In the Quebec Tariff there are three classes of fees—but whether adapted to different classes of patients, or to be taken by physicians according to the time they have been in practice (as recently proposed in England), we are not informed. In either case, the plan appears to us very objectionable; and we apprehend our Canadian friends will find, that the tendency to the third class of charges will be constantly increasing, and the first will shortly become a dead letter—a lure to young men to settle under its auspices, but a standard which will not be maintained, in actual practice, whilst two that are lower stand prominent by its side. It appears to us, that, in all places, a definite value should be set by the faculty on every kind of professional service. This should be liberal, and proportioned to the time, skill and anxiety expended in performing it, and be charged *in all cases*, excepting only to the poor, to whom medical aid is rendered, in every country, gratuitously and cheerfully. In a few instances, circumstances may require some diminution of the gross amount of a bill; as for example, when protracted illness in a family has both swelled it to a very large sum, and made serious inroads on the resources of the debtor. Cases, however, requiring deviation from a uniform practice, will not be found very numerous. A fair and proper compensation for medical attendance, is paid as promptly by the retailer of tea and sugar, as by the flourishing merchant; by the mechanic of moderate fortune, as by the grandee who rolls in idleness and wealth.

STAMMERING.

Our readers cannot fail to remember the explanation of this singular affection proposed by Dr. Arnott in his treatise on Physics, which went the round of the periodicals, both medical and popular, about six months ago. Dr. A. attributed it to clonic spasm, and placed the seat of it in the glottis. But this mode of accounting for the disease, though ingenious and plausible, is not sufficient to explain all the phenomena it presents. That it is for the most part spasmodic, and independent of any organic defect, we have no doubt; but what are the muscles particularly concerned, it is not so easy to decide. The subject has lately attracted considerable notice in the French Academy, in consequence of a memoir there offered, containing a new, and, as is said, very successful mode of treatment. It appears that the author, M. Colombat, views the disease in the light above mentioned, as dependent on an imperfect control of the organs of voice, and that the remedial means proposed by him have for their object to induce the patient to avoid precipitancy, and to utter every word with attention and care. Among the means employed to promote this effect, some are mechanical, as the holding pebbles in the mouth after the manner of the Greek orator; and others depend on the introduction of some regulator or standard by which the rapidity of the enunciation should be measured. Among these are mentioned certain movements of the lips; movements of the tongue itself, independent of those required for speaking; and the motions of respiration. By either of these, or by all in succession, the rapidity of utterance is to be measured; but in what precise manner M. Colombat proposes to apply them, we are not informed. It appears, however, that the committee who report on his method, had examined several individuals on whom it was tried, and who, by means of it, had conquered the defect. It would appear, indeed, from this and other observations, that it is sufficient to give the tongue a position which cramps its movements, and increases the effort necessary for utterance, in order to produce, at least for the time, a distinct enunciation. The effect of these expedients, however, is necessarily temporary; and without a greater degree of resolution and perseverance than most persons can command, a permanent cure in any case is scarce to be expected. It is a curious fact, that of the individuals affected with this complaint, by far the greatest proportion are men.

REUNION OF DIVIDED PARTS.

One of the most remarkable phenomena dependent on the laws of vitality, is that by which organized parts, previously distinct and separate, unite, on being placed in contact with each other, so as to form together a single organized body. It is not an uninteresting subject of inquiry, under what variety of circumstances this process is found to occur, and what favorable results may be expected from the operation of this law in the human body, in cases of severe injury from violence or accident. In the familiar process of grafting, as commonly practised in vegetables, a vascular communication establishes itself between two parts previously strangers to each other, but each having before made part of a living plant. In this case, we infer that the vessels of both parts retain unimpaired their irritability, that is, their power to receive fluids presented to them, and to transmit these fluids in a certain direction to subserve the processes for the growth of the plant. This circumstance constitutes one of the conditions necessary for the success of the operation. Another equally essential is, that the parts thus applied possess a certain degree of analogy in their structure and functions; that the form of the fruit, the density of the wood, the quantity of sap it requires, and the period of the year in which it ascends, should be nearly the same in each. It is only within these limits that the union of different plants can be successfully accomplished; and beyond them we have reason to suppose that the operation, however well executed, will fail to effect its purpose.

The process of grafting or inoculation in plants, has been, in all its essential parts, precisely imitated in experiments on the animal texture. In the celebrated experiments of Hunter, parts were transferred from one animal to another, and to different situations in the same animal, and were found to unite and grow without difficulty. In these cases, the transfer appears to have been immediate, and it does not appear that any attempt was made to determine what interval might be allowed to elapse without defeating the object. One of the most remarkable of these, was that in which a human tooth, transplanted into the comb of a cock, took root and remained permanently fixed. The piece is now shown in his museum. The comb has been injected, and the coloring matter evidently appears to have passed into the vessels of the tooth.

These facts, it is evident, would afford ground for the inference that a similar union might take place between parts of the human body, either having previously no connection, or of which the connection had been severed by accident. It does not appear, however, whether those who first practised operations with this view, were guided to them by any reasoning founded on these data. In the celebrated operation attributed to Tagliacozzi or Taliacotius, neither the previous solution of continuity, nor the circumstance that the opposed parts were from remote situations in the body, or were furnished by different individuals, was considered as forming any obstacle to the union. Indeed, it is said that the nose was generally supplied from that portion of the integument of another individual which could best be spared. What makes it probable that the idea of inoculation was kept in view, is the singular prejudice adopted, that the borrowed part would not survive the individual from whom it was derived; a doctrine to which Butler coarsely but humorously alludes, in a passage of Hudibras, too familiar to require quotation. This operation has, within a few years, been repeatedly performed, although, as we apprehend, unaccompanied with the circumstance, above mentioned, of obtaining the part from the person of another. Indeed, as the Taliacotian operation is now practised, the detachment of the part which furnishes the lost member is not complete, and therefore it scarce affords a true illustration of the principle.

Another class of cases, however, namely, those in which an exposed part, like a finger, has been completely severed from the body, occurs much more frequently; and the knowledge of the possibility of union, and of the means by which it may be effected, is important both to practitioners and to the public. It is very certain, that, notwithstanding the number of cases which have occurred, and the conformity of the general principle to the well-established laws of organized matter, the principle itself is still doubted by many, and the particular facts which go to confirm it are reluctantly admitted. That the subject should be thus regarded, even by persons of some observation, is not unaccountable; for the aspect and sensible qualities of a portion of animal substance, when separated from the body, is by no means such as to inspire the observer with any very lively hope of its reanimation. The pale color, the bloodless surface, and still more the loss of animal heat, communicate an irresistible conviction of the death of the part; and it requires some effort of the mind to resist this conviction, and to adopt promptly and vigorously the means of affording relief. Did these cases always come at once under the care of a surgeon, this prevalent scepticism would be of less importance. But accidents of this kind are frequently occurring, where the attendance of a medical man cannot be obtained for hours, or perhaps is not applied for at all; and thus a serious mutilation is suffered, which a judicious and timely aid might have averted. Even among practitioners, we apprehend the idea prevails, that assistance, to be of use, must be immediate; and that, after a short, though uncertain interval, union becomes impossible. It may perhaps be gratifying to such of our readers as have any doubt on this subject, to peruse the following account of some of the cases on record in which wounds, with entire solution of continuity, have been successfully treated by union of the divided parts. We select them from an article in a highly respected contemporary, and believe that the facts, without exception, are sustained by unquestionable authority.

1, 2. In the two first cases mentioned, a small portion of the finger was taken off by a cutting instrument, and immediately reapplied by the persons present, without any surgical aid. The wounds readily healed.

3. In the third case, a joiner, by the name of Salembier, carelessly cut off entirely the end of his finger, just below the last articulation. Leaving the finger in the shavings where it had fallen, he went to seek assistance. A young man was sent to look for the finger, which was applied about fifteen or twenty minutes after the separation. Reunion took place.—This story is told by M. Percy, in the Diction. des Sc. Med. Art. Ente animale.

4. Another case was reported by Balfour, a Scotch surgeon, about fifteen years since. Two men came to him, one of whom had just cut off the forefinger, but had left it in the place where the accident happened. His companion went for it, and returned in about five minutes. The finger was cold and colorless. The surgeon remarked at the time, that, in appearance and consistence, it resembled a piece of suet. The incision was oblique, extending from the second to the third phalanx. Adhesion took place without accident.

5. Heister relates that a butcher's wife having completely severed one of her fingers, the detached part was reapplied, and kept in place by a bandage, till it perfectly united.

6. A surgeon having been sent for in the case of a workman who had cut off part of the forefinger of the right hand, did not arrive till a quarter of an hour had elapsed from the time of the accident. The part was then replaced, and united readily, although the wound was oblique, and extended across an articulation.

7. A Dr. Bailey mentions a case which occurred at the village of Thetford in England. A finger remained nearly an hour and a half separated from the hand, yet was reapplied with success.

8. A more remarkable instance, which occurred recently, is mentioned in the Bulletin des Sc. Med. for Feb., 1830. A man, in cutting wood, took off the first phalanx of his little finger. Two hours afterwards, he presented himself to the surgeon with the fragment in his pocket. The part seemed entirely dead. It was, however, reapplied, and secured with a plaster and bandages. At the end of three days, the parts being examined, were found to have united in two or three places, and the extremity of the cut finger exhibited decided proof of vitality. The dressing was continued, and in three days more the union was complete.

It would appear from the above cases, that a reunion of divided parts has occurred, even when the separation had continued for the space of two hours. Within this period, therefore, there would seem to be sufficient encouragement for making the attempt; since a failure would not at all diminish the means of healing the stump by subsequent granulation. It is almost unnecessary for the general reader, and entirely so for the practitioner, to be reminded of the importance of an exact adjustment of the parts to each other, and of employing means by which the apposition may be accurately maintained, until union has either been effected, or appears evidently impracticable.

ILLUSTRATION OF S. COOPER'S SURGICAL DICTIONARY.

A WORK with this title is now publishing in London, and bids fair to constitute a very valuable appendix to that celebrated and useful work. It is publishing in monthly numbers, each containing four lithographic prints, in which are to be given a faithful illustration of all the diseases treated of by Mr. Cooper, with references to the text. The first few numbers, which are already before the English public, are said to be very neatly and correctly executed.

ELEMENTS OF SURGERY.

MR. LISTON has published the first part of his "Elements of Surgery." The work will embody the useful practical part of his lectures at Edinburgh, and in it, all speculative discussion will be avoided, and the author will confine himself to facts and illustrations. If this work proves such as the talents, skill and enterprise of its author lead us to anticipate, it will form a most valuable text book to the surgical student.

Davy's Voltaic Battery more Powerful than the Artillery of Britain.—Let the reader only recal to his recollection the bitter animosity which France and England mutually entertained towards each other in the year 1807, and he will be able to form some idea of the astounding impression which the Bakerian Lecture must have produced on the savans of Paris, when, in despite of national prejudice and national vanity, it was crowned by the Institute of France with the prize of the First Consul! Thus did the Voltaic battery, in the hands of the English chemist, achieve what all the artillery of Britain could never have produced!—a spontaneous and willing homage to British superiority!—But let not this observation convey the slightest idea of disrespect, or be supposed to encourage any feeling to the disparagement of the chemists of France; on the contrary, it is even a question not readily answered, to which party the triumph fairly belongs,—to him who won the laurel crown, or to those who so nobly placed it on his brow? They have set an example to future ages, which may as materially advance the progress of science, as the researches which called it forth:—they have shown, to adopt the language of an eloquent writer, "that the commonwealth of science is of no party, and of no nation; that it is a pure republic, and always at peace. Its shades are disturbed neither by domestic malice nor foreign levy; they resound not with the cries of faction or of public animosity. Falsehood is the only enemy their inhabitants denounce; truth, and her minister reason, the only leaders they follow.—*Med. Gaz.*

Steam Doctoring.—We are indebted to the *Wreath*, an entertaining weekly paper, edited by Dr. Lucas O'Brien, and published at Fell's Point (Baltimore), for the following sportive notice of an extended and mischievous branch of quackery. The consummate impudence and self-satisfied ignorance of the steam practitioners, would be irresistibly comic, as a mere matter of speculative absurdity, did not their proceedings involve questions of health and life, which are too often compromised by these self-styled illuminati. We shall endeavor, ere long, to show them up in their true colors.

Baltimore, November, 1830.

DEAR TIM: I embrace the present opportunity of writing to you, by Nathan Wilkins, who tells mee that you and Beckey, and all the folks is well, and I am glad to say I am as well as ever I was in my life. But Tim, I suppose you have been wondering what I came to town for, and what I have been doing these eleven weaks; why Tim, the fact is, I am lerning the *Steam Doctoring Business.* Now you will hardley believe mee when I tell you that in three weeks more I shall get a certificate from my Boss—No, thats what I used to call Jim Vulcan, my old master, and a professional man calls his boss a praceptor. Well, as I was saying, in three weaks I shall get a paper to prove that I am able to cure aney kind of sickness whatsomever. So you may advise Doctor Bolus, and Doctor Ulna, and Doctor Exastosis, and Doctor Phalangia, —— —— —— and the whole raft of them to get ready and pack up their duds and bolt off to the western countrey, as I intends to doe all the practice in that part of the countrey that they doctor in; in fact, I dont believe they will want aney other doctor in the whole countrey but mee. But Tim you will bee astonished to see what wonderfull doctoring this *Steam Business* is; its shure to kill or cure right off, and dont keep people in misery: besides, it is so easily larned; in about three months a person can larn to cure aney disease, and draw teeth in the bargain (but bleeding is werrey seldom necessary), and another thing is, it dont cost so much as the old kind of doctoring; I dont suppose it will cost father more than one hundred dollars for my larnin to be a doctor, that is, counting board, clothes and all, and I have got a bran new suite of black, since I have been in town; I believe the coat cost fifteen dollars; dont tell Beckey though, for I want to surprise her; she wont call mee Chris Blackface when she sees mee again, for I dont look like I used to doe when I was a blacksmiths Boy; no body calls me Chris here, they all call me *Doctor Costive.*

But Tim, I tell you what I mean to do, I'll come out in the countrey, set up an office, an I am shure to make a forten in no time; besides, I mean to marry your sister Beckey next spring, and I shall be the biggest bug in the whole countery, and in fact shall be the hapiest fellow in the whole world. Farewell till I see you.

Yours, CHRISTOPHER COSTIVE.
To Timothy Thump.

Journ. of Health.

Whole number of deaths in Boston the week ending March 26th, 17. Males, 8—Females, 9. Stillborn, 3.

Of consumption, 5—lung fever, 4—dropsy, 1—croup, 2—fever, 1—suffocation, 2—unknown, 2.

ADVERTISEMENTS.

COPARTNERSHIP NOTICE. JOHN COTTON and DAVID CLAPP, JR. have taken HENRY S. HULL into copartnership, and the printing and publishing business, which has heretofore been conducted at 184 Washington St. in the name of JOHN COTTON, will be continued under the firm of CLAPP & HULL.

D. C. and H. S. H. will give their personal attention to Book and Job Printing, of every variety, which will be neatly and correctly executed, upon reasonable terms.

⁎ Booksellers and authors are informed that the printing of medical and other works, of any size, will be undertaken as above, and every branch of their mechanical execution will receive particular attention. March 29.

VELPEAU'S MIDWIFERY. This day received and for sale by CARTER, HENDEE & BABCOCK—An Elementary Treatise on Midwifery, or Principles of Tokology and Embyology. By Alf. A. L. M. Velpeau, M.D. March 29.

THE NATURALIST. Devoted to Zoology, Botany and Mineralogy, illustrated by Lithographic Prints, edited by D. Jay Browne, aided by distinguished Naturalists, and published monthly by Peirce and Parker, No. 9 Cornhill, Boston. Each number contains 32 octavo pages. Price, Two Dollars a year in advance.
March 22.

NOTICE. Those gentlemen who are yet indebted for the 1st vol. of the Med. and Surg. Journal, from Feb., 1828, to Feb., 1829, are hereby notified, that, after four weeks, the Proprietors of that Volume have authorized Mr. S. Smith to collect all that is due to them for it; and he present Proprietor respectfully requests that those indebted to him for the Medical Intelligencer, and the 2d and 3d vols. of the Med. and Surg. Journal, will forward all arrears. JOHN COTTON.

The subscribers above mentioned for said 1st vol., are hereby requested to remit payment for the same to the subscriber, at the office of the Boston Daily Advertiser.
SAMUEL SMITH, Agent for said Proprietors.
March 1, 1831.

COPARTNERSHIP NOTICE. The subscribers have formed a connexion in business as CHEMISTS, DRUGGISTS & APOTHECARIES, at Apothecaries' Hall, No 188 Washington Street, opposite Marlboro' Hotel, under the firm of JARVIS & PEIRSON.
NATHAN JARVIS.
GEORGE W. PEIRSON.

EUROPEAN LEECHES.

J. & P. have a few fine European Leeches—to the application of which, when directed by Physicians, they will attend without any additional charge.
Feb. 8.

WILLIAMS ON DISEASES OF THE CHEST. This day received, by CARTER & HENDEE, "A Rational Exposition of the Physical Signs of the Diseases of the Lungs and Pleura, illustrating their Pathology and facilitating their Diagnosis." By Charles J. B. Williams. Dec. 6.

BECLARD'S GENERAL ANATOMY. CARTER, HENDEE & BABCOCK have this day received—Elements of General Anatomy, or a Description of every kind of Organ composing the Human Body. By P. A. Beclard, Professor of Anatomy of the Faculty of Medicine of Paris. Preceded by a critical and biographical Memoir of the Life and Writings of the Author. By Olivier, M.D. Translated from the French, with Notes. By Joseph Togno, M.D., Member of the Philadelphia Medical Society. Dec. 28.

The Boston Medical and Surgical Journal is published weekly, by Clapp & Hull, at 184 Washington St. corner of Franklin St., to whom all communications must be addressed, *post-paid.*—Price three dollars per annum, if paid in advance, three dollars and a half if not paid within three months, and four dollars if not paid within the year. The postage for this is the same as for common newspapers.